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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/362,080	07/27/1999	HENRY M. D'SOUZA	27757-403	6404

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EXAMINER
EISEN, ALEXANDER

ART UNIT	PAPER NUMBER
2674	

DATE MAILED: 06/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/362,080	Applicant(s) D'SOUZA ET AL.	
	Examiner Alexander Eisen	Art Unit 2674	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 March 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19,30,31,33 and 34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19,30,31,33 and 34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *15* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 25 March 2002 has been entered.

2. Claims 20-29 and 32 have been canceled by preliminary amendment; claims 8, 12 and 30 have been entered as amended.

3. Claims 1-19, 30, 31, 33 and 34 are pending in current application.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-4, 6, 7, 16-19, and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over McManus in view of Narveson et al., ("Narveson"), US Patent No. 4,386,345 and further in view of Petitt et al., (hereinafter Petitt), US 6,108,053.

McManus discloses a system for computing polynomial equation coefficients to represent an input-output color characteristic of a color display device that can be used further for calculating the look-up tables converting the input signal to a color display into a color brightness displayed on the screen of the color display device.

McManus further teaches that the computer performing the task of calibration is supplied with the data, which is generated through the spectroradiographic analysis of the monitor during the manufacturing of the latter (col. 5, lines 48-67).

McManus does not specifically disclose that the polynomial coefficients are stored in a data storage device or memory in said color display device. McManus rather discloses that the calculated coefficients are used for calculating look-up tables for each electron gun for consequently storing look-up tables by the computer.

Narveson teaches a color cathode ray tube having a "CRT personality PROM" containing the color/brightness characteristics of this particular CRT, input-output transfer characteristic included, which have been prepared during the CRT assembly (see abstract, col. 4, lines 3-38; col.4, line 57 – col.5, line 23).

Narveson also teaches storing polynomial coefficients for adjusting an electron beam focus in accordance with the reference brightness in the tube's personality PROM.

Neither McManus nor Narveson teach or suggest explicitly storing coefficient representation of color input-output characteristics, they rather teach the look-up tables, which are used for this purpose.

Petitt teaches a method for calibrating a color wheel system, wherein the derived correction coefficients are stored in the device memory of the wheel itself in order to associate these coefficients such that any color wheel could be used with any projector (column 8, line 30 – column 9, line 7).

It would be obvious to one of ordinary skill in the art at the time of the invention to use the teaching of Naverson in the display calibration system of McManus in the part that transfer

characteristic data of a particular display is being stored in the memory of that display, which is integral part of the display, so that it would not require calibration each time of the using it in different computer system (Narveson, col. 4, lines 20-26), or to store coefficients rather than the look-up tables produced by these coefficients in the display device itself as taught by Petitt. Even though Petitt uses a simple linear correction coefficients (column 4), which are practically would be equal to the first term of polynomial equations, it would have been obvious to one of ordinary skill in the art that the input-output characteristic could be presented by the polynomials of higher order, such as 5 or 7, for example, as taught by McManus.

As to claim 7, it is well known in the art that color correction is applicable to a color display of any type, be it VGA MultiSync CRT or LCD, or any other type, as long as it is used to display colors.

As to claim 19, it is obvious that data can be stored in any type of memory capable of storing digital data, DDC (dual-dielectric cells) memory devices included, and since it would not bring any unexpected results it would have been obvious to one of ordinary skills to use it.

6. Claims 8-13, 15 and 30-32 are rejected under 35 U.S.C. 103(a) as obvious over McManus in view of Petitt.

McManus discloses a system for computing polynomial equation coefficients to represent an input-output color characteristic of a color display device. McManus further teaches that the computer performing the task of calibration is supplied with the data, which is generated through the spectroradiographic analysis of the monitor during the manufacturing of the latter (col. 5, lines 48-67).

McManus does not specifically disclose that the polynomial coefficients are communicated to said color display device for storage in a data storage device associated with said color display device. McManus rather discloses that the calculated coefficients are used for calculating look-up tables for each electron gun for consequently storing look-up tables by the computer into a memory of the device driver (22) via the communication link (26).

Petitt teaches a method for calibrating a color wheel system, wherein the derived correction coefficients are stored in the device memory of the wheel itself in order to associate these coefficients such that any color wheel could be used with any projector.

It would have been obvious to one of ordinary skill in the art at the time of the invention to store coefficients produced by the calibration process of McManus in the memory of the display device itself as taught by Petitt, so that the display device could be used with any type of video source.

As to claim 10, it is well known in the art that color characteristics are changing with the temperature and most of the measurements in the world of testing are taken after the device under test is warmed up and its temperature is stabilized.

As to claim 11, it is obvious that data processed and stored in the computer system of McManus can be stored in any type of memory capable of storing digital data, DDC (dual-dielectric cells) memory devices included, and since it would not bring any unexpected results it would have been obvious to one of ordinary skills to use it.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over McManus in view of Narveson and further in view of Petitt and further in view of Minato et al., ("Minato"), US 4,379,292.

McManus discloses a system for computing polynomial equation coefficients to represent an input-output color characteristic of a color display device.

Narveson teaches a color cathode ray tube having a "CRT personality PROM" containing the color/brightness characteristics of this particular CRT, input-output transfer characteristic included, which have been prepared during the CRT assembly. Neither of the above disclose expressly that a third order polynomial equation is used for representation, which predicts the brightness to within 0.3 foot-Lamberts for each input signal. McManus rather teaches that acceptable curve fitting results are obtained when the degree of the polynomial is in order from 5 to 7.

Petitt teaches a method for calibrating a color wheel system, wherein the derived correction coefficients are stored in the device memory of the wheel itself in order to associate these coefficients such that any color wheel could be used with any projector.

Minato teaches a luminance characteristic curves for a color display that can be presented by a polynomial equations of a third order (see FIG. 1 and equation (19) in column 5, line 10. It would have been obvious to one of ordinary skill in the art that color brightness characteristic for each input signal can be presented by a plurality of coefficients utilized in a third order polynomial equation, and that the order can be arbitrarily picked up by a designer depending on required accuracy, 0.3 fL included.

8. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over McManus in view of Petitt and further in view of Minato.

McManus discloses a system for computing polynomial equation coefficients to represent an input-output color characteristic of a color display device.

McManus does not discloses expressly that a third order polynomial equation is used for representation, which predicts the brightness to within 0.3 foot-Lamberts for each input signal. McManus rather teaches that acceptable curve fitting results are obtained when the degree of the polynomial is in order from 5 to 7.

Petitt teaches a method for calibrating a color wheel system, wherein the derived correction coefficients are stored in the device memory of the wheel itself in order to associate these coefficients such that any color wheel could be used with any projector

Minato teaches a luminance characteristic curves for a color display that can be presented by a polynomial equations of a third order (see FIG. 1 and equation (19) in column 5, line 10. It would have been obvious to one of ordinary skill in the art that color brightness characteristic for each input signal can be presented by a plurality of coefficients utilized in a third order polynomial equation, and that the order can be arbitrarily picked up by a designer depending on required accuracy, 0.3 fL included.

Response to Arguments

9. Applicant's arguments with respect to amended independent claims 1, 8, 12, 16, 30 and 33 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Smith, US 6,285,349, teaches storing correction coefficients derived during factory calibration into a device memory.

Chase et al., US 4,385,289, teaches storing polynomial calibrating coefficients into a device look-up table.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Eisen whose telephone number is **(703) 306-2988**. The examiner can normally be reached on M-F (9:00 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerpe can be reached on **(703) 305-4709**.

Any response to this action should be **mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or **faxed to:**

(703) 872-9314 (for Technology Center 2600 only).

Hand-delivered responses should be **brought to:** Crystal Park Two, 2121 Crystal Drive, Arlington, Virginia, Sixth Floor Receptionist.

Any inquiry of a general nature or relating to the status of this application or proceeding should be **directed to:** Technology Center 2600 Customer Service Office, whose telephone number is **(703) 306-0377**.

AE

Alexander Eisen
June 10, 2002

RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600